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[Proposed Rules]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 721

[EPA-HQ-OPPT-2005-0036; FRL-7733-9]

RIN 2070-AJ19

Mercury Switches in Motor Vehicles; Proposed Significant New Use Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing a significant new use rule (SNUR) under section 5(a)(2) of the Toxic Substances Control Act (TSCA) for elemental mercury (CAS No. 7439-97-6) used in convenience light switches, anti-lock braking system (ABS) switches, and active ride control system switches in certain motor vehicles. This action would require persons who intend to manufacture (including import) or process mercury for these uses, including when mercury is imported or processed as part of an article, to notify EPA at least 90 days before commencing such activity. EPA believes that this action is necessary because manufacturing, processing, use, or disposal of mercury switches may produce significant changes in human and environmental exposures. The required notice would provide EPA with the opportunity to evaluate the use of mercury in these switches, and, if necessary, to prohibit or limit such activity before it occurs to prevent unreasonable risk of injury to human health or the environment.

DATES: Comments must be received on or before September 11, 2006.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPPT-2005-0036, by one of the following methods:

Federal eRulemaking Portal: <http://www.regulations.gov>.

Follow the on-line instructions for submitting comments.

Mail: Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001.

Hand Delivery: OPPT Document Control Office (DCO), EPA East, Rm. 6428, 1201 Constitution Ave., NW., Washington, DC. Attention: Docket ID number EPA-HQ-OPPT-2005-0036. The DCO is open from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The telephone number for the DCO is (202) 564-8930. Such deliveries are only accepted during the DCO's normal hours of operation, and special

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arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to docket ID number EPA-HQ-OPPT-2005-0036. EPA's policy is that all comments received will be included in the public docket without change and may be made available on-line at <http://www.regulations.gov>, including any personal information

provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through regulations.gov or e-mail. The regulations.gov website is an ``anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket, visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

Docket: All documents in the docket are listed in the regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose

disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically at <http://www.regulations.gov> or in hard copy at the OPPT Docket, EPA

Docket Center (EPA/DC), EPA West, Rm. B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the OPPT Docket is (202) 566-0280.

FOR FURTHER INFORMATION CONTACT: For general information contact: Colby Lintner, Regulatory Coordinator, Environmental Assistance Division (7408M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (202) 554-1404; e-mail address: TSCA-Hotline@epa.gov.

For technical information contact: Benjamin Lim, National Program Chemicals Division (7404T), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (202) 566-0481; e-mail address: lim.benjamin@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

You may be potentially affected by this action if you manufacture, (defined by statute to include import) or process elemental mercury for use in certain motor vehicle switches. Persons who intend to import any chemical substance subject to TSCA must comply with the TSCA section 13 (15 U.S.C. 2612) import certification requirements, and the regulations codified at 19 CFR 12.118 through 12.127 and 127.28. Those persons must certify that they are in compliance with applicable rules or orders under TSCA including any SNUR. The EPA policy in support of import certification appears at 40 CFR part 707, subpart B. In addition, any persons who export or intend to export a chemical substance that is the subject of this proposed rule on or after August 10, 2006 are subject to the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b)) (see 40 CFR 721.20), and must comply with the export

notification requirements in 40 CFR part 707, subpart D. Potentially affected entities may include, but are not limited to:

Manufacturers and processors of automotive electrical switches (NAICS 335931), e.g., manufacturers and processors of mercury switches in convenience lights, ABS acceleration sensors, and ride control sensors.

Manufacturers and processors of transportation equipment (NAICS 336), e.g., manufacturers of motor vehicles and motor vehicle parts containing mercury switches.

Automotive repair and maintenance (NAICS 8111), e.g., auto mechanics who replace or install new mercury switches as part of repair and maintenance of vehicles.

Motor vehicle part (used) wholesalers (NAICS 4211), e.g., auto dismantlers who dismantle motor vehicles and sell used parts.

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in this unit could also be affected. The North American Industrial Classification System (NAICS) codes have been provided to assist you and others in determining whether this action might apply to certain entities. To determine whether you or your business may be affected by this action, you should carefully examine the applicability provisions in 40 CFR 721.5 for SNUR-related obligations. If you have any questions regarding the applicability of this action to a particular entity, consult the technical person listed under FOR FURTHER INFORMATION CONTACT.

B. What Should I Consider as I Prepare My Comments for EPA?

1. Submitting CBI. Do not submit this information to EPA through regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. Tips for preparing your comments. When submitting comments, remember to:

- i. Identify the document by docket number and other identifying information (subject heading, Federal Register date, and page number).
- ii. Follow directions. The Agency may ask you to respond to

specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

iii. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

iv. Describe any assumptions and provide any technical information and/or data that you used.

v. If you estimate potential costs or burdens, explain how you arrived at the estimate.

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vi. Provide specific examples to illustrate your concerns and suggested alternatives.

vii. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

viii. Make sure to submit your comments by the comment period deadline identified.

II. Background

A. What Action is the Agency Taking?

This proposed SNUR would require persons to notify EPA at least 90 days before commencing the manufacture or processing of elemental mercury for use in convenience light switches, ABS switches, and ride control switches in certain motor vehicles, including when mercury is imported or processed as part of such an article. EPA believes this action is necessary because manufacturing, processing, use, or disposal of mercury in these switches may produce significant changes in human and environmental exposures.

B. What is the Agency's Authority for Taking this Action?

Section 5(a)(2) of TSCA (15 U.S.C. 2604(a)(2)) authorizes EPA to determine that a use of a chemical substance is a ``significant new use.'' EPA must make this determination by rule after considering all relevant factors, including those listed in section 5(a)(2) of TSCA. Once EPA determines that a use of a chemical substance is a significant new use and a SNUR is effective, TSCA section 5(a)(1)(B) requires persons to submit a significant new use notice (SNUN) to EPA at least 90 days before they manufacture or process the substance for that use.

C. Applicability of General Provisions

General provisions for SNURs appear in 40 CFR part 721, subpart A.

These provisions describe persons subject to the rule, recordkeeping requirements, exemptions to reporting requirements, and applicability of the rule to uses occurring before the effective date of the final rule. However, Sec. 721.45(f) would not apply to this proposed SNUR. As a result, persons subject to the provisions of this rule would not be exempt from significant new use reporting if they imported or processed elemental mercury as part of an article (see Sec. 721.5).

Provisions relating to user fees appear at 40 CFR part 700. Persons subject to this proposed SNUR are required to comply with the same notice requirements and EPA regulatory procedures as submitters of premanufacture notices (PMNs) under section 5(a)(1)(A) of TSCA. Those requirements include the information submission requirements of TSCA sections 5(b) and 5(d)(1), the exemptions authorized by TSCA section 5(h)(1), (2), (3), and (5) and the regulations at 40 CFR part 720 (see 40 CFR 721.1(c)). Once EPA receives a significant new use notice (SNUN), EPA may take regulatory action under TSCA sections 5(e), 5(f), 6 or 7, as appropriate, to control the activities described in the SNUN. If EPA does not take action after receipt of a SNUN, EPA is required under TSCA section 5(g) to explain in the Federal Register its reasons for not taking action.

Persons who intend to export a chemical substance identified in a proposed or final SNUR are subject to the export notification provisions of TSCA section 12(b). The regulations that implement TSCA section 12(b) appear at 40 CFR part 707, subpart D. Persons who intend to import a chemical substance identified in a final SNUR are subject to the TSCA section 13 import certification requirements, which appear at 19 CFR 12.118 through 12.127 and 127.28. Such persons must certify that they are in compliance with TSCA requirements. The EPA policy on import certification appears at 40 CFR part 707, subpart B.

III. Summary of Proposed Rule

A. Background

Because of its unique properties, elemental mercury has been used in many industrial processes and consumer products. Mercury switches exploit the ability of small quantities of mercury to conduct electricity and remain one of the largest categories of mercury product uses. In addition to its unique properties, mercury also may cause adverse effects in humans and wildlife under certain conditions. These effects can vary depending on the form of mercury to which a person is exposed and the severity, level, and length of exposure. Most human and wildlife exposure to mercury comes from eating fish contaminated with methylmercury, an organic mercury compound that is formed when certain

microorganisms and other natural processes convert mercury to methylmercury, which can accumulate in fish. Methylmercury is a highly toxic organic form of mercury and can cause neurological impairment. Fetuses, infants, and young children are more sensitive to mercury than adults.

Mercury switches were used for many years in motor vehicles in hood and trunk convenience lights, ABS, and ride control systems. In the U.S., most motor vehicles that reach the end of their useful life are dismantled, so that the useful parts can be reused, and steel and other materials can be recycled. During the recycling process, the vehicles are dismantled, crushed, shredded, and vehicle scrap is separated into the ferrous, nonferrous, and auto shredder residue fractions. All of these fractions have the potential to be contaminated with mercury released when switches are ruptured during processing. The steel fractions are sent to electric arc furnaces (EAFs) and other scrap consumers to be melted and refined for use in steel products. These processes use intense heat which can vaporize mercury. Mercury can then be released in air emissions from these facilities. Motor vehicles are believed to be the largest single source of mercury in EAF emissions. EAFs are the largest manufacturing source of mercury air emissions in the U.S. and the fourth largest of all U.S. sources.

Mercury in the air eventually settles into water or onto land where it can be washed into water. Once mercury is deposited in sediment, certain microorganisms and other processes in the environment can convert some of it into methylmercury. Methylmercury persists in the environment and can build up in fish, shellfish, and animals that eat fish. The primary way that people and wildlife are exposed to mercury is by eating methylmercury-contaminated fish. By 2004, forty-four states, one territory, and two Indian tribes had issued fish consumption advisories recommending that some people limit their consumption of fish from certain waterbodies as a result of methylmercury found in fish. The nervous system is particularly sensitive to the adverse effects of methylmercury, with the developing fetus and young child among those particularly at risk from exposure to high amounts of methylmercury. For this reason, in 2004, EPA and the Food and Drug Administration (FDA) jointly issued a national advisory providing advice to women of childbearing age and young children on mercury in fish and shellfish.

Because of increasing concerns about exposure to man-made sources of mercury and the availability of suitable mercury-free alternatives, attempts have been made at the Federal and state level to limit the use of mercury in certain products. American automakers voluntarily eliminated use of mercury switches in automobiles as of January 1,

2003. Those foreign auto manufacturers that had used mercury switches have also eliminated this use. Over the next 20 years, most of the automobiles containing mercury switches will reach

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the end of their life and be recycled, ultimately passing through EAFs and other scrap consumers. Many states and non-governmental organizations have taken actions to remove or encourage the removal of mercury switches from automobiles before they are recycled. For these reasons, the potential for mercury emissions being released from scrap consumption will decrease as fewer automobiles containing mercury switches remain to be processed into scrap.

While new automobiles are no longer being manufactured containing mercury switches, some mercury switches are still available as aftermarket replacement parts. Mercury switches generally last the lifetime of the automobile; however, replacement is needed if a collision or other action damages the component containing the switch. Mercury switches are not still available for replacement in hood and trunk convenience lights, because mercury-free switches can be easily substituted as replacement parts. However, there is no existing mercury-free alternative for mid-life replacement of ABS and ride control switches. Therefore, a limited number of mercury ABS and ride control switches will remain available as replacement parts for pre-2003 automobiles. EPA is proposing to exclude from this proposed SNUR mercury switches manufactured as aftermarket replacement parts for ABS and ride control systems in vehicles manufactured before January 1, 2003. In addition to the fact that there are no feasible mercury-free alternatives, EPA is aware that the demand for mercury switches as aftermarket replacement parts is currently low and will become negligible when most pre-2003 vehicles containing mercury switches in ABS and ride control systems have reached the end of their lives.

B. Proposed Action

EPA believes that any resumption of manufacture or processing of mercury for the significant new use would lead to an increase in mercury emissions at EAFs and other facilities involved in scrap recycling and consumption. Therefore, EPA is proposing to designate as significant new uses manufacture or processing of elemental mercury for the following:

Use in convenience light switches in new motor vehicles.

Use in convenience light switches as new aftermarket replacement parts for motor vehicles.

Use in switches in ABS in new motor vehicles.

Use in switches in ABS as new aftermarket replacement parts for motor vehicles that were manufactured after January 1, 2003.

Use in switches in active ride control systems in new motor vehicles.

Use in switches in active ride control systems as new aftermarket replacement parts for motor vehicles that were manufactured after January 1, 2003.

EPA defines motor vehicle for this proposed SNUR by referencing the definition used in the emissions control regulations developed under the Clean Air Act (CAA). That definition, which is found at 40 CFR 85.1703, is as follows:

(a) For the purpose of determining the applicability of section 216(2), a vehicle which is self-propelled and capable of transporting a person or persons or any material or any permanently or temporarily affixed apparatus shall be deemed a motor vehicle, unless any one or more of the criteria set forth below are met, in which case the vehicle shall be deemed not a motor vehicle and excluded from the operation of the Act:

(1) The vehicle cannot exceed a maximum speed of 25 miles per hour over level, paved surfaces; or

(2) The vehicle lacks features customarily associated with safe and practical street or highway use, such features including, but not being limited to, a reverse gear (except in the case of motorcycles), a differential, or safety features required by state and/or federal law; or

(3) The vehicle exhibits features which render its use on a street or highway unsafe, impractical, or highly unlikely, such features including, but not being limited to, tracked road contact means, an inordinate size, or features ordinarily associated with military combat or tactical vehicles such as armor and/or weaponry.

(b) The Administrator will, from time to time, publish in the Federal Register a list of vehicles which have been determined to be excluded. This list will be in appendix VI of 40 CFR part 85.

This definition, which includes passenger cars, light duty trucks, heavy duty vehicles, and motorcycles, encompasses most motor vehicles intended for highway use. In addition to typical passenger cars such as sedans and station wagons, the motor vehicle definition also includes categories such as pickups, passenger and cargo vans, minivans, and sport utility vehicles. The larger passenger carrying vehicles such as buses as well as the larger freight carrying vehicles such as semi trucks are also included. EPA believes that it is important to take advantage of the regulated community's familiarity with the Air

Program's interpretation of ``motor vehicles.'' Should the current definition of motor vehicle at 40 CFR 85.1703 be amended, the definition used for this SNUR would change as a result. Should that occur, and should EPA determine that the definition is no longer appropriate for use in this SNUR, EPA could take appropriate action to amend the regulatory text at Sec. 721.10068.

The Alliance of Automobile Manufacturers (AAM) is a trade association representing nine new car and light truck manufacturers. The AAM reports that all cars and light trucks built since 2003 are free of mercury switches (Ref. 1). Foreign automobile manufacturers not represented by the AAM discontinued the use of mercury auto switches in the 1990s. The Truck Manufacturers Association has also indicated that trucks have discontinued their use of all types of mercury switches (Ref. 2). Passenger cars and light trucks account for about 96% of the vehicles on the road and have been the primary focus of most efforts to remove mercury switches from vehicles (Ref. 2). Although the other types of motor vehicles have received less attention, EPA believes that mercury switches are not being used in convenience lights, ABS, or ride control systems in any new motor vehicles and that it is appropriate to include them in this proposed SNUR. EPA requests comment on whether there are mercury switches being used for convenience lights, ABS, or ride control systems in any new vehicles that would be covered by the proposed motor vehicle definition.

For this SNUR, EPA is proposing to lift the exemption at Sec. 721.45(f) so that persons importing or processing mercury as part of an article would be subject to Sec. 721.5. EPA believes this exemption is not appropriate to this SNUR because mercury-containing switches are articles and should be covered by the SNUR. Furthermore, it is possible to reclaim mercury from certain articles and use that mercury to produce automotive switches. EPA is asking for comments on this proposed approach. See Unit VII.D.

This proposed rule, when finalized, would require persons who intend to manufacture or process elemental mercury for the significant new uses identified in this action to submit a SNUN at least 90 days before commencing such activity. The required notice would provide EPA with the opportunity to evaluate the intended use, and if necessary, to prohibit or limit that use before it occurs. Given that

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mercury switches are no longer being used in new motor vehicles and given the availability of effective mercury-free alternatives, the declining use of mercury in products, and the growing number of states that have banned the use of mercury automotive switches, EPA believes

it is unlikely that companies would resume the use of automotive mercury switches (Ref. 3). In the event that the decline in the use of mercury switches as replacement parts in ABS and ride control systems of pre-2003 motor vehicles does not progress as described in this proposed rule, EPA may pursue additional regulatory action as appropriate under TSCA sections 4, 6, and 8.

IV. Overview of Mercury and Mercury Auto Switches

There are several documents available which summarize the extensive literature that exists on mercury. EPA's Mercury Report to Congress (Ref. 4) provides a complete discussion of mercury as it was understood in 1997. A ``Toxicological Profile for Mercury,'' which covers all forms of mercury, is available from the Agency for Toxic Substances and Disease Registry (ATSDR) (Ref. 5). EPA's Integrated Risk Information System (IRIS), an electronic database of computer files containing descriptive and quantitative information, peer-reviewed summaries, and toxicological reviews, includes an entry for methylmercury (Ref. 6). A thorough review of the human health effects of methylmercury can be found in the National Research Council (NRC) of the National Academies of Science report titled ``Toxicological Effects of Methylmercury'' (Ref. 7). More recently, the Regulatory Impact Analysis (RIA) of the Clean Air Mercury Rule (CAMR) (Ref. 8), published in March 2005, provides an update of much of the science as it relates to the effects of mercury emissions. These documents are the major sources of the information summarized in this unit.

A. Chemistry

This proposed rule applies to elemental mercury, which is a naturally occurring element, CAS registry number 7439-97-6. The properties and behavior of mercury are related to its three forms: Elemental or metallic mercury, inorganic mercury compounds, and organic mercury compounds. Elemental or metallic mercury, which is a silver-white metal, is the pure form of mercury, not combined with any other elements. Although elemental mercury is liquid at room temperature and pressure, it vaporizes readily when exposed to air. Most of the mercury in the atmosphere is elemental mercury vapor. Inorganic mercury compounds take the form of mercury salts and are generally white powder or crystals, with the exception of mercuric sulfide (cinnabar), which is red. Organic mercury compounds, such as methylmercury, are formed when mercury combines with carbon. In the air, elemental mercury vapor can be transported, changed into other forms of mercury, and deposited in water or soils in rain or snow. Most of the mercury in water, soil,

sediments, or biota are in the forms of inorganic mercury salts and organic forms of mercury. Microscopic organisms convert inorganic mercury into methylmercury, which is the most common organic mercury compound found in the environment. Methylmercury is the form of mercury that accumulates in the food chain. It can reach levels in fish that can be toxic to people and wildlife who consume mercury-contaminated fish (Ref. 5).

B. Environmental Fate

Mercury is well known as a highly persistent, bioaccumulative, toxic pollutant that is widespread in the environment. Because it is a naturally occurring element, it is present in the environment from natural sources, such as weathering of rocks, as well as from anthropogenic (human) activities, such as industrial combustion. Mercury in the air eventually settles into water or onto land where it can be washed into water. Once mercury is deposited in sediments, certain microorganisms and other natural processes can convert some portion of it into methylmercury, a highly toxic organic form of mercury. While all forms of mercury can bioaccumulate, methylmercury generally accumulates to a greater extent than other forms of mercury. Methylmercury can build up (bioconcentrate) in fish, shellfish, and animals that eat fish. The concentrations of methylmercury in organisms higher in the food chain can be 10^4 - 10^6 times higher than the original concentration of methylmercury in the water (Ref. 8). The primary way people in the U.S. are exposed to mercury is by eating fish containing methylmercury. By 2004, forty-four states, one territory, and two Indian tribes had issued fish consumption advisories recommending that some people limit their consumption of fish from certain water bodies as a result of methylmercury found in fish (Ref. 9).

Studies have indicated that because mercury persists in the environment and methylmercury biomagnifies up the foodchain, a wide variety of species and ecosystems may be exposed to excessive levels of mercury in the environment. Because of the complexity of the mercury cycle, it is difficult to predict the original source of mercury found at a given location. Mercury levels may be due to contributions from a mix of local, regional, and long range mercury sources. Mercury from all of these sources will be from both natural and anthropogenic emissions. Although there is uncertainty as to the exact amount, EPA has estimated that about 17% of U.S. mercury deposition is from U.S. and Canadian man-made sources and about 83% is from global sources, including natural, re-emitted, and international man-made sources (Ref. 10). A large anthropogenic source of mercury emissions is EAFs, which

release mercury vapor when they process scrap from old cars containing mercury switches, among other items.

Mercury cycles through the atmosphere and ends up in watersheds, in water bodies and sediment, and ultimately can accumulate in fish. Mercury-contaminated fish may potentially be consumed by humans and wildlife. Despite recent advances, current understanding does not allow the prediction of specific ecosystem responses to mercury emissions. The analyses conducted for the CAMR are based on the best available information and are applicable here. Both the CAMR and this proposed rule are concerned with the effects of mercury emissions from anthropogenic sources. The CAMR RIA developed estimates for its benefits analysis based on three elements:

- Results from an ecosystem scale exposure model.

- Results from an analysis of U.S. fishing activity.

- Results from a study of mercury concentrations in consumer fish species.

One of the conclusions of the ecosystem scale modeling was that the best available science suggests that over the long term, changes in mercury concentrations in freshwater fish will be proportional to changes in mercury inputs. In water bodies where atmospheric deposition of inorganic mercury is the major source of mercury, it is expected that long term reductions in fish mercury concentrations will be proportional to declines in atmospheric mercury deposition (Ref. 8). While it is not currently possible to quantify ecological benefits, it can be qualitatively stated that reduction in mercury emissions from various sources could lead to improvements in overall ecosystem health (Ref. 8). Applying similar logic, it can be qualitatively stated that increases in mercury emissions could lead to increases in mercury concentrations in the

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environment and reduction in overall ecosystem health.

C. Exposure Pathways

Mercury exists in various forms and people are exposed to each in different ways. Consumption of methylmercury-contaminated fish is the most important nonoccupational source of mercury exposure to people in the U.S. Episodes of severe methylmercury poisoning in Japan and Iraq indicated that consumption of food contaminated with methylmercury could be highly toxic to adults, children, and developing fetuses. Mothers showing few if any signs of nervous system damage gave birth to infants with severe disabilities, confirming that developing fetuses

were more sensitive to methylmercury than adults. Although these situations described exposures to methylmercury far greater than those from typical dietary consumption in the U.S., data from those episodes as well as epidemiological studies have been used by EPA to support its concerns about potential methylmercury exposures (Ref. 7).

In 2001, EPA confirmed its 1995 oral Reference Dose (RfD) for methylmercury of 0.1 micrograms/kilogram ($\mu\text{g}/\text{kg}$) body weight-day (bw/d) as an exposure without recognized adverse effects (Ref. 6). Consumption of fish with higher methylmercury levels can lead to elevated mercury levels in the bloodstream and hair. Mercury in blood and hair was measured as part of the 1999-2002 National Health and Nutrition Examination Survey (NHANES). The 1999-2002 NHANES data showed that about 6% of women of childbearing age (16-49 years of age) had blood mercury concentrations greater than 5.8 $\mu\text{g}/\text{L}$ (which is a blood mercury level equivalent to the current RfD) (Ref. 11).

Another less common human exposure pathway for mercury is breathing elemental mercury vapor. This exposure can occur when elemental mercury is released or when products that contain elemental mercury break and release mercury to the air, particularly in warm or poorly-ventilated indoor spaces. Inhalation of elemental mercury vapor is the main source of occupational exposure to mercury. Industries that use elemental mercury in their processes have had the largest occupational mercury exposure; however, the imposition of workplace exposure limits on mercury is expected to reduce worker exposure (Ref. 5). Workers may also transport mercury home on contaminated clothing and shoes. There have been reports of increased mercury exposure to children of workers who are exposed in the workplace. Persons living near mercury production, use, and disposal sites may be exposed to mercury that has been released from these sites to the surrounding air, water, and soil (Ref. 5).

Bioaccumulation of methylmercury up through the food chain is also the most important exposure pathway for both aquatic and terrestrial wildlife; although methylmercury bioaccumulates more strongly in aquatic than in terrestrial ecosystems. In fish, methylmercury tissue concentrations increase with increasing age and size of the fish. Methylmercury-contaminated fish are then consumed by fish-eating wildlife, which accumulate methylmercury to levels above those in the original prey items. The methylmercury continues to concentrate as fish-eating wildlife are consumed by larger predators. A well known example of bioaccumulation through the food chain is the endangered Florida panther, which was found to have elevated methylmercury levels due to consumption of raccoons that were contaminated with methylmercury from eating methylmercury-contaminated fish and shellfish

(Ref. 4).

Birds, particularly coastal species or those eating prey that feed in estuaries, are most impacted by mercury contamination (Ref. 12). In birds, tissue mercury concentrations associated with toxicity have been found to be relatively similar, regardless of bird species, dietary exposure level, and length of exposure. Frank neurological signs are generally associated with brain mercury concentrations of 15 [μ g/gram (g) (wet weight) or higher and 30 [μ g/g or more in liver and kidney (Ref. 4). In mammals, levels of exposure that induce mercury poisoning vary among species. Death occurs in sensitive land mammal species at 0.1-0.5 [μ g/g bw/d, or 1.0-5.0 [μ g/g in the diet (Ref. 4).

D. Health and Environmental Effects

The factors that determine how severe the health effects are from mercury exposure include the chemical form of mercury, the dose, the duration of exposure, the route of exposure (e.g., breathing, eating) and the age and health of the person exposed. Both dietary and non-dietary exposure to mercury can result in a variety of health effects. In the extreme cases of methylmercury poisoning that occurred in Japan and Iraq, some people who consumed methylmercury-contaminated food developed permanent damage to the brain and kidneys (Ref. 5). Nondietary exposure to elemental mercury vapors also affects the nervous system. Different forms of mercury have different effects on the nervous system, because they move through the body in different ways. However, both ingestion of methylmercury and inhalation of elemental mercury vapors can cause a variety of symptoms, including personality changes (irritability, nervousness), tremors, changes in vision, deafness, muscle incoordination, loss of sensation, and difficulties with memory (Ref. 5). The nervous system of the developing fetus appears to be the most sensitive target for adverse effects of methylmercury. Prenatal mercury exposure may cause children to perform poorly on neurobehavioral tests that measure attention, fine motor function, language skills, visual-spatial abilities, and verbal memory (Ref. 7).

Recent epidemiological studies exploring the relationship between methylmercury and cardiovascular impacts in men have yielded conflicting conclusions; however, there is enough information to justify additional research on this topic. Some research also suggests that exposure to methylmercury may lessen the beneficial effects of fish consumption. Methylmercury has been classified as a ``possible'' human carcinogen, based on limited human and animal data. Additional research is needed to corroborate studies that have suggested that methylmercury exposure could result in genetic, reproductive, renal,

hematologic or immune system impacts (Ref. 4).

Both short-term exposure to high levels or long-term exposure to lower levels of elemental mercury vapor can irritate the lining of the mouth and the lungs. Other effects from exposure to elemental mercury vapor include nausea, vomiting, diarrhea, increase in blood pressure or heart rate, skin rashes, and eye irritation (Ref. 5).

In wildlife, mercury contamination has been shown to cause death as well as sublethal effects. Although mercury consumption can result in bird death, a variety of sublethal effects on reproduction and behavior have been found to occur in birds at dietary concentrations well below those that can cause overt toxicity (Ref. 4). Methylmercury contamination in birds can adversely affect breeding by causing reduction in the number of eggs laid and increased embryo mortality (Ref. 12). Methylmercury attacks the central nervous system in mammalian wildlife as well as in humans. Methylmercury ingestion can also cause reduced food intake, weight loss, muscular atrophy and damage to an animal's heart, lungs, liver, kidneys and stomach (Ref. 4). Mercury contamination has been documented in endangered species,

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such as the Florida panther and the wood stork, as well as in populations of loons, eagles, and furbearers such as mink and otters. Recent assessments have concluded that mercury exposures may have contributed to the decline in the endangered Florida panther in the Florida Everglades, most likely from decreased reproductive success in addition to death (Ref. 4).

E. Use Information

Mercury has been widely used in industry and consumer products because of its diverse properties, such as conducting electricity, responding to temperature and pressure changes, and forming alloys with almost all other metals. Use of mercury has declined because its toxicity has resulted in state and Federal limits on its use in various products and safe, mercury-free alternatives are available for many products. One of the larger remaining product uses is in switches. Mercury tilt switches are small tubes with electrical contacts at one end of the tube. As the tube tilts, the mercury collects at one end, providing a conductive path to complete the circuit. When the switch is tilted back, the circuit is broken. Tilt switches have been used in automobiles for convenience lights in the trunk and hood, in ABS and ride control systems. While convenience lights were used in all types of automobiles, ABS and ride control systems were primarily used in

higher end, four-wheel drive vehicles. As of 1996, convenience light switches, ABS system switches, and ride control system switches accounted for 87, 12, and 1 percent, respectively, of mercury switch usage in automobiles (Ref. 2). The mercury content of mercury switches varied from 0.7 to 1.5 grams, with an average of 0.8 grams per switch. Automakers used mercury light switches in convenience lighting (one switch per light), such as underhood and trunk lighting. Mercury ABS switches were usually made up of three individual switches, containing about one gram of mercury each. For ride control systems, most commonly two and up to four mercury switches were used, containing approximately one gram of mercury per switch (Ref. 13).

There are two general categories for use of mercury switches in motor vehicles:

- Installed in new motor vehicles.

- Available as an aftermarket replacement part.

While these switches normally last the lifetime of a vehicle, it is possible that they could be damaged, for example in a collision, and need to be replaced. In general, replacement parts can be purchased through a dealer, auto service shop, or auto parts retailer. In the case of mercury switches, which are unlikely to need replacement, the original equipment manufacturer usually agrees to supply the replacement part for about seven years after the vehicle is sold (Ref. 2).

American automobile manufacturers voluntarily discontinued the use of mercury switches in new models as of January 1, 2003 (Ref. 1). Those foreign automobile manufacturers that had used mercury switches discontinued their use of mercury switches in new models in the 1990s. Since mercury-free switches can be used as aftermarket parts to replace mercury switches in convenience lights, mercury convenience light switches are no longer available as aftermarket replacement parts. EPA believes that there are no feasible non-mercury alternatives for mid-life replacement in ABS and ride control systems that contain mercury switches. EPA solicits comment on this issue.

Mercury switches are still being manufactured as replacement parts for pre-2003 cars containing ABS and ride control systems with mercury switches. Because ABS and ride control systems containing mercury switches are only found on a few models of pre-2003 vehicles, and the mercury switches would likely only need to be replaced if they were damaged in a collision, there is a very small market for replacement mercury switches for ABS and ride control systems. Available information indicates that mercury switches needed as replacement parts are not being regularly manufactured but must be specially ordered (Ref. 2). This market should continue to decline as the pre-2003

vehicles reach the end of their lives. Automobiles have a life expectancy of about ten to fifteen years. Once those vehicles are no longer in use, there will be only a very minimal market for mercury switches for ABS and ride control systems.

It is unlikely that auto manufacturers would resume the use of automotive mercury switches. The ability to use mercury switches in new vehicles would be limited to vehicles for sale in certain states. There are a number of states that have banned the use of automotive mercury switches, which prompted auto manufacturers to discontinue their use. As evidenced by their nationwide discontinuation of mercury switch use following the Maine state ban, it is not generally cost effective for auto manufacturers to make vehicles with one set of components for sale in some states and another set of components for vehicles for sale in a different state (Ref. 3).

V. Significant New Use Determination

Section 5(a)(2) of TSCA provides that EPA's determination that a use of a chemical substance is a significant new use must be made after consideration of all relevant factors including:

The projected volume of manufacturing and processing of a chemical substance.

The extent to which a use changes the type or form of exposure of human beings or the environment to a chemical substance.

The extent to which a use increases the magnitude and duration of exposure of human beings or the environment to a chemical substance.

The reasonably anticipated manner and methods of manufacturing, processing, distribution in commerce, and disposal of a chemical substance. 15 U.S.C. 2604(2)(A)-(D).

EPA construes the statute to allow consideration of any other relevant factors, in addition to those enumerated in section 5(a)(2)(A) through (D) of TSCA.

To determine what would constitute a significant new use of elemental mercury, EPA has considered relevant information about the toxicity of mercury, the likely exposures and releases associated with the life cycle of elemental mercury manufactured for use in automotive switches, and the four factors listed in section 5(a)(2) of TSCA. The life cycle steps include the following:

Mercury switch manufacturing.

Automobile manufacturing.

Automobile collision, repair, and maintenance.

End-of-life vehicle recycling.

U.S. auto manufacturers discontinued the use of mercury switches in

convenience lights, ABS and ride control systems in new automobiles as of January 1, 2003. Those foreign automobile manufacturers that had used mercury switches discontinued their use of mercury switches in new models in the 1990s. New mercury switches are still available as mid-life replacement parts only for pre-2003 ABS and ride control systems that originally contained mercury switches. However, available information indicates these replacement parts are not being regularly manufactured, but must be specially ordered. Therefore, this market is very small and will continue to decline as vehicles containing these switches reach the end of their useful life.

Given that few mercury switches are being manufactured and none are being installed in new automobiles as part of convenience lights, ABS and ride

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control systems, the resumption of use of mercury switches for these uses in new automobiles would require a significant increase in the manufacture and processing of mercury switches. This would result in an increase in the magnitude and duration of exposure to workers and the surrounding environment at facilities of all types in the life cycle, as well as an increase in releases which could contribute additional mercury to the atmosphere for long range transport. This could also result in exposures to workers at automobile manufacturing and automobile collision, repair and maintenance facilities who had not previously worked in these facilities when mercury switches were commonly used in automobiles, as well as exposures to workers who are not currently being exposed to mercury switches.

Over the next twenty years, mercury emissions due to mercury switches in automotive scrap will decrease, because automobile manufacturers stopped installing mercury switches for convenience lights, ABS, and ride control systems as of January 1, 2003. Automobiles have a life expectancy of about ten to fifteen years. Reintroduction of mercury switches for automotive uses would thus result in future increases of mercury emissions at EAFs, if most end of life vehicles would continue to be recycled as scrap in the future as they are today. Once again, increases in mercury emissions could lead to increases in mercury concentrations in the environment and reduction in overall ecosystem and human health from consumption of mercury-contaminated fish. Based on these considerations, EPA has determined that any manufacturing or processing of elemental mercury for the uses designated in this proposed rule is a significant new use.

VI. Effects and Objectives of this Proposed Rule

In determining what would constitute significant new uses for mercury auto switches, EPA considered relevant information on the toxicity of mercury, likely exposures associated with the uses, and the four factors listed in TSCA section 5(a)(2) and discussed in Unit V.

If this proposed rule is finalized, it will allow EPA to provide the following assurances:

EPA would receive a SNUN indicating a person's intent to manufacture or process elemental mercury for a designated significant new use before that activity begins.

EPA would have an opportunity to review and evaluate data and information submitted in a SNUN before the notice submitter begins manufacturing or processing elemental mercury for a designated significant new use.

EPA would have an opportunity to regulate prospective manufacturers and processors of elemental mercury before a significant new use occurs, provided such regulation is warranted pursuant to TSCA section 5(e) or (f).

As summarized in Unit IV., EPA has concerns regarding the environmental fate and the exposure pathways that lead to the presence of methylmercury in fish and the consumption of mercury-contaminated fish by humans and wildlife. American automakers voluntarily discontinued use of mercury switches in new vehicles by January 1, 2003. Although production of ABS and ride control systems containing mercury switches will continue as long as pre-2003 models containing them need mid-life replacement parts, that market is very limited. It should cease once pre-2003 vehicles containing mercury switches are no longer available. However, EPA is concerned that manufacture or processing of mercury for use in auto switches in new vehicles could be reinitiated in the future and wants the opportunity to evaluate and control, if appropriate, occupational and other exposures associated with those activities. The notice that would be provided by the SNUN would provide EPA with the opportunity to evaluate activities associated with a significant new use as proposed herein and an opportunity to protect against unreasonable risks, if any, from exposure to mercury.

In the event the decline in the use of mercury switches as replacement parts in ABS and ride control systems of pre-2003 motor vehicles does not proceed as described in this proposed rule, EPA may pursue additional regulatory action as appropriate under TSCA sections 4, 6, and 8.

VII. Alternatives/Other Options Considered

Before proposing this SNUR, EPA considered the following alternative regulatory actions for elemental mercury.

A. Promulgate a Regulation Under the Clean Air Act

Section 112(d) of the CAA requires EPA to establish emission standards for all categories and subcategories of major sources of hazardous air pollutant (HAP) emissions and for area sources listed for regulation under section 112(c). Mercury compounds are metal HAPs. In terms of industries that consume scrap, EPA has promulgated national emissions standards for hazardous air pollutants (NESHAPs) for iron and steel foundries in the Federal Register of April 22, 2004 (69 FR 21905) (FRL-7554-5) and integrated iron and steel mills in the Federal Register of May 20, 2003 (68 FR 27645) (FRL-7460-2) and is in the process of developing an area source rule for EAFs. The industry for these source categories melts steel scrap that can contain automotive mercury switches. EPA believes that removing mercury switches from scrap before it is melted is the most effective way for most EAF facilities to reduce mercury emissions resulting from automotive mercury switches. Under the CAA, EPA may regulate only the listed source category, such as EAFs used in producing steel and, therefore, EPA does not regulate the manufacture, use, or disposal of mercury switches per se. The iron and steel foundries NESHAP addresses mercury emissions by requiring scrap selection and inspection programs to remove mercury switches from automotive scrap. However, under TSCA, EPA can regulate mercury switches earlier in their life cycle, by using the authorities of TSCA section 5 to consider human and environmental hazards during the manufacturing, processing, and use, as well as the disposal of mercury switches and to take immediate regulatory action under TSCA section 5(e) or 5(f) to prohibit or limit the manufacture, processing, or distribution in commerce of mercury switches before it begins. If the elimination of the use of mercury switches in ABS and ride control replacement parts does not occur as anticipated, EPA may reevaluate its options for addressing automotive scrap under the CAA and pursue additional regulatory action as appropriate.

B. Promulgate a TSCA section 8(a) Reporting Rule

Under a TSCA section 8(a) rule, EPA could generally require manufacturers and processors to report information to the Agency when they intend to manufacture or process elemental mercury. However, the use of TSCA section 8(a) rather than the SNUR authority, would not provide the opportunity for EPA to review human and environmental hazards and exposures associated with the new use of elemental mercury

and, if necessary, to take immediate regulatory action under TSCA section 5(e) or section 5(f) to prohibit or limit the activity before it begins. In addition, EPA may not receive important information from small businesses, because those firms are generally exempt from TSCA section

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8(a) reporting requirements. In view of EPA's concerns about elemental mercury and the uses subject to this proposed rule and EPA's interest in having the opportunity to review these uses and regulate them as appropriate, pending the development of exposure and/or hazard information should a significant new use be initiated, the Agency believes that a TSCA section 8(a) rule for elemental mercury would not meet all of EPA's regulatory objectives.

C. Regulate Elemental Mercury Used in Certain Automotive Switches Under TSCA section 6

EPA must regulate under TSCA section 6 if ``there is a reasonable basis to conclude that the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance or mixture...presents or will present an unreasonable risk of injury to health or the environment'' (TSCA section 6(a)). Given that mercury switches are no longer being used in convenience lights, ABS, and ride control systems installed in new automobiles, are no longer used in convenience light replacement parts, and are of very limited availability in ABS and ride control replacement parts for some pre-2003 models, EPA concluded that risk management action under TSCA section 6 is not necessary at this time. This proposed SNUR would allow the Agency to address the potential risks associated with the significant new uses of elemental mercury. If the elimination of the use of mercury switches in ABS and ride control replacement parts does not occur as anticipated, EPA may reconsider this decision and pursue additional regulatory action as appropriate.

D. Allow the Exemption for Persons that Import or Process Elemental Mercury as Part of Articles that Could be Subject to the SNUR

Under the SNUR exemption provision at 40 CFR 721.45(f), a person that imports or processes a substance covered by a SNUR identified in subpart E of part 721 as part of an article is not generally subject to the notification requirements of Sec. 721.25 for that substance. However, EPA is concerned that exempting articles would render the SNUR

less effective because of the possibility that switches containing elemental mercury could be imported or processed for uses subject to this proposed SNUR without the submission of a SNUN. Because mercury-containing automotive switches are the primary concern in this SNUR, EPA wishes to include not only elemental mercury but also articles containing elemental mercury. Thus, EPA is proposing to promulgate this rule without the exemption generally provided for in Sec. 721.45(f).

Alternatively, EPA could lift the exemption provisions of 40 CFR 721.45(f) solely for articles containing automotive switches; however, EPA believes it is appropriate to include all articles within the scope of this SNUR, because it is possible to reclaim mercury from articles containing elemental mercury and use that mercury to produce automotive switches. Furthermore, a limited lifting of the exemption could be confusing and of limited benefit, because persons importing or processing mercury-containing articles would not be required to submit a SNUN if they can meet the requirements of Sec. 721.5(a)(2) or Sec. 721.5(c). Therefore, EPA is proposing to promulgate this SNUR without the exemption provided in Sec. 721.45(f). EPA is specifically seeking comments on the issue of whether the exemption under Sec. 721.45(f) should be lifted in whole or in part, or whether the exemption should remain. EPA would particularly like to hear from persons that import or process elemental mercury as part of articles on how the proposed alternative will affect them.

E. Define a Narrower Scope of Motor Vehicles

EPA is considering narrowing the scope of motor vehicles subject to the SNUR. A narrower definition might limit the SNUR to vehicles intended primarily for noncommercial transport of passengers, such as passenger cars, pickup trucks, sport-utility vehicles, minivans, and passenger vans. These types of passenger automobiles comprise an estimated 96% of the vehicles on the road, and it is well known that the use of mercury switches in convenience lights, ABS, and ride control systems in new passenger automobiles was voluntarily discontinued as of January 1, 2003. Passenger automobiles have been the primary focus of most efforts to remove mercury switches from vehicles. There is less certainty about the status of mercury switch usage in some of the larger passenger and freight carrying vehicles, such as buses and semi trucks. Nevertheless, EPA believes that mercury switches are not currently being used for convenience lights, ABS, or ride control systems in all types of new motor vehicles, and that the broader definition encompassing all motor vehicles more appropriately addresses EPA's concerns about elemental mercury and the uses subject to this proposed rule. EPA requests comments on narrowing the scope of

vehicles covered to limit it to passenger automobiles and on whether mercury switches are being installed in any types of new motor vehicles.

VIII. Applicability of Rule to Uses Occurring Before Effective Date of the Final Rule

To establish a significant ``new'' use, EPA determines that the use is not ongoing. EPA has decided that the intent of section 5(a)(1)(B) of TSCA is best served by designating a use as a significant new use as of the date of publication of the proposed rule, rather than as of the effective date of the final rule. Thus, persons who begin commercial manufacture, import, or processing of elemental mercury for the significant new use described by this SNUR will have to cease any such activity before the effective date of the final rule. To resume their activities, these persons would have to comply with all applicable SNUN requirements and wait until the notice review period, including all extensions, expires.

EPA has promulgated provisions to allow persons to comply with this SNUR before the effective date. If a person were to meet the conditions of advance compliance under Sec. 721.45(h), the person would be considered to have met the requirements of the final SNUR for those activities. If persons who begin commercial manufacture, import, or processing of the substance between publication and the effective date of the SNUR do not meet the conditions of advance compliance, they must cease that activity before the effective date of the final rule. To resume their activities, these persons would have to comply with all applicable SNUN requirements and wait until the notice review period, including all extensions, expires.

IX. Risk and Market Information

EPA recognizes that section 5 of TSCA does not require the development of any particular test data or information before submission of a SNUN. Persons are required only to submit test data and information in their possession or control and to describe any other data known to or reasonably ascertainable by them (15 U.S.C. 2604(d); 40 CFR 721.25).

However, SNUN submitters should be aware that EPA will be better able to evaluate SNUNs which provide detailed information on:

Human exposure and environmental releases that may result from the significant new uses of elemental mercury.

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Potential benefits of the use of the elemental mercury.

Information on risks posed by the use of elemental mercury in automotive switches relative to risks posed by mercury-free substitutes.

Information on how the concerns about mercury emissions during disposal of end-of-life vehicles could be mitigated (e.g., rebates for switches removed before shredding).

Submitters should consider including with a SNUN any other available studies on elemental mercury or studies on analogous substances which may demonstrate that the significant new uses being reported are unlikely to present an unreasonable risk.

In view of the potential risks posed by manufacture, processing, distribution, and disposal of elemental mercury for use in automotive switches, EPA would recommend in the final rule that potential SNUN submitters include data and other information that would permit a reasoned evaluation of risks posed by elemental mercury. EPA encourages persons to consult with the Agency before submitting a SNUN for these uses. As part of this optional pre-notice consultation, EPA would discuss specific data and information it believes are necessary to evaluate a significant new use. A SNUN submitted without sufficient data and information to reasonably evaluate risks posed by a significant new use of elemental mercury may increase the likelihood that EPA will take action under TSCA section 5(e) to prohibit or limit activities associated with elemental mercury and these uses. EPA recommends that potential SNUN submitters contact the Agency early enough that they will be able to conduct any appropriate tests and develop any appropriate information.

X. SNUN Submissions

SNUNs should be mailed to the Environmental Protection Agency, OPPT Document Control Office (7407M), 1200 Pennsylvania Avenue, N.W., Washington, DC 20460-0001. Information must be submitted in the form and manner set forth in EPA Form No. 7710-25. This form is available from the Environmental Assistance Division (7408M), OPPT, Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460-0001 (see 40 CFR 721.25(a) and 720.40(a)(2)(i)).

XI. Economic Considerations

A. SNUNS

EPA has evaluated the potential costs of establishing SNUR

reporting requirements for potential manufacturers and processors of the chemical substances included in this proposed rule. While there is no precise way to calculate the total annual cost of compliance with the final rule, given the uncertainties related to predicting the number of SNUN's that would be submitted as a result of this SNUR, EPA estimates that the cost for preparing and submitting a SNUN is \$7,302, including a \$2,500 user fee required by 40 CFR 700.45(b)(2)(iii) (Ref. 3). Small businesses with annual sales of less than \$40 million when combined with those of the parent company (if any) are subject to a reduced user fee of \$100 (40 CFR 700.45(b)(1)). Based on past experience with SNURs and the low number of SNUNs which are submitted on an annual basis, EPA believes that there will be few, if any, SNUNs submitted as a result of this SNUR. In this case, it is unlikely that a SNUN would be submitted, because there are a number of states that have banned the use of mercury in vehicle switches, thus the ability to use mercury switches in new motor vehicles would be limited to vehicles for sale only in certain states. The costs of submission of SNUNs will not be incurred by any company unless a company decides to pursue a significant new use as defined in this SNUR. Furthermore, while the expense of a notice and the uncertainty of possible EPA regulation may discourage certain innovations, that impact would be limited because such factors are unlikely to discourage an innovation that has high potential value. EPA's complete economic analysis is available in the public docket for this proposed rule (Ref. 3).

B. Export Notification

As noted in Unit II.C., persons who intend to export a chemical substance identified in a proposed or final SNUR are subject to the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b)). These provisions require that, for chemicals subject to a proposed or final SNUR, a company notify EPA of the first shipment to a particular country in a calendar year of an affected chemical substance. EPA estimated that the one-time cost of preparing and submitting an export notification to be \$93.02. The total costs of export notification will vary per chemical, depending on the number of required notifications (i.e., number of countries to which the chemical is exported).

EPA is unable to estimate the total number of TSCA section 12(b) notifications that will be received as a result of this SNUR, or the total number of companies that will file these notices. However, EPA expects that the total cost of complying with the export notification provisions of TSCA section 12(b) will be limited based on historical experience with TSCA section 12(b) notifications and the fact that no

companies have currently been identified that currently market any of the chemical substances that are the subject of this rule commercially. If companies were to manufacture for export only any of the chemical substances covered by this SNUR, such companies would incur the minimal costs associated with export notification despite the fact they would not be subject to the SNUR notification requirements. See TSCA section 12(a) and 40 CFR 721.45(g). EPA is not aware of any companies in this situation.

XII. References

The public docket for this action, EPA-HQ-OPPT-2005-0036, currently includes the following documents:

1. Alliance of Automobile Manufacturers, 2003. Facts About Mercury Switches, December, 2003. Accessible online at:

<http://www.autoalliance.org/archives/Mercury.pdf>

2. EPA, 2005a. Market Study: Mercury Use in Automotive Switches. Washington, D.C. EPA/OPPTS/EETD/EPAB, August, 2005.

3. EPA, 2005b. Economic Analysis of the Significant New Use Rule for Mercury Containing Automotive Switches. Washington, D.C. EPA/OPPTS/EETD/EPAB, January 12, 2006.

4. EPA, 1997. U.S. Environmental Protection Agency. Mercury Study Report to Congress. EPA-452/R-97-003, December 1997. Accessible at:

<http://www.epa.gov/ttn/oarpg/t3/reports/volume1.pdf>.

5. ATSDR, 1999. Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services. Toxicological Profile for Mercury (update). Accessible online at:

<http://www.atsdr.cdc.gov/toxprofiles/tp46.html>.

6. EPA, 2002. U.S. Environmental Protection Agency. Integrated Risk Information System (IRIS). Methylmercury. Oral RfD and inhalation RfC assessments last revised 7/27/01; Carcinogenicity assessment last revised 5/1/95; most recent revision of on-line materials, 2002; website accessed May 2005. Accessible online at:

<http://www.epa.gov/iris/subst/0073.htm>

7. NRC, 2000. National Research Council. Toxicological Effects of Methylmercury. Committee on the Toxicological Effects of Methylmercury,

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Board on Environmental Studies and Toxicology, Commission on Life Sciences, National Research Council. National Academy Press, Washington, D.C. Accessible online at:
<http://books.nap.edu/books/0309071402/html/1.html>

8. EPA, 2005c. U.S. Environmental Protection Agency. Regulatory Impact Analysis of the Clean Air Mercury Rule, Final Report. EPA-452/R-05-003, March 2005. Accessible online at:
http://www.epa.gov/ttn/atw/utility/ria_final.pdf

9. EPA, 2005d. 2004 National Listing of Fish Advisories. Fact Sheet, Sept. 2005. EPA-823-F-05-004. Accessible at:
<http://epa.gov/waterscience/fish/advisories/fs2004.pdf>

10. EPA, 2005e. Technical Support Document, Revision of December 2000 Finding on the Emissions of Hazardous Air Pollutants from Electric Steam Generating Units and the Removal of Coal- and Oil-Fired Electric Utility Steam Generating Units From the Section 112 (c) List: Reconsideration, October 21, 2005. Accessible online at
<http://www.epa.gov/ttn/atw/utility/TSD-112-final.pdf>

11. CDC, 2004. Centers for Disease Control and Prevention. Blood Mercury Levels in Young Children and Childbearing Aged-Women - United States, 1999-2002. Morbidity and Mortality Weekly Report, November 5, 2004/53(43):1018-1020. Accessible online at:
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5343a5.htm>

12. Boening, D.W. 2000. Ecological effects, transport, and fate of mercury: A general review. Chemosphere 40: 1335-1351.

13. EPA, 2005f. Screening Level Workplace Release and Exposure Assessment for Mercury Switches in New Automobiles. Washington, D.C. EPA/OPPTS/EETD/CEB, September 6, 2005.

XIII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866, entitled Regulatory Planning and

Review (58 FR 51735, October 4, 1993), the Office of Management and Budget (OMB) has determined that this proposed SNUR is not a ``significant regulatory action'' because this rule does not meet the criteria in section 3(f) of the Executive Order.

B. Paperwork Reduction Act

According to the Paperwork Reduction Act (PRA), 44 U.S.C. 3501 et seq., an Agency may not conduct or sponsor, and a person is not required to respond to a collection of information that requires OMB approval under the PRA, unless it has been approved by OMB and displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in title 40 of the CFR, after appearing in the Federal Register, are listed in 40 CFR part 9, and included on the related collection instrument or form, if applicable.

The information collection requirements related to this action have already been approved by OMB pursuant to the PRA under OMB control number 2070-0038 (EPA ICR No. 1188). This action would not impose any burden requiring additional OMB approval. If an entity were to submit a SNUN to the Agency, the annual burden is estimated to average 105 hours per submission. This burden estimate includes the time needed to review instructions, search existing data sources, gather and maintain the data needed, and complete, review, and submit the required SNUN.

Send any comments about the accuracy of the burden estimate, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques, to the Director, Collection Strategies Division, Office of Environmental Information (2822T), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001. Please remember to include the OMB control number in any correspondence, but do not submit any completed forms to this address.

C. Regulatory Flexibility Act

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 et seq.), the Agency hereby certifies that promulgation of this SNUR would not have a significant adverse economic impact on a substantial number of small entities. The rationale supporting this conclusion is as follows. A SNUR applies to any person (including small or large entities) who intends to engage in any activity described in the rule as a ``significant new use.'' By definition of the word ``new,'' and based on all information currently available to EPA, it appears that no small or large entities presently engage in such activity. Since a SNUR only requires that any person who intends to

engage in such activity in the future must first notify EPA by submitting a SNUN, no economic impact would even occur until someone decides to engage in those activities. Although some small entities may decide to conduct such activities in the future, EPA cannot presently determine how many, if any, there may be. However, EPA's experience to date is that, in response to the promulgation of over 1,000 SNURs, the Agency receives on average only 10 notices per year. Of those SNUNs submitted, none appear to be from small entities in response to any SNUR. In addition, the estimated reporting cost for submission of a SNUN (see Unit XI.), are minimal regardless of the size of the firm. Therefore, EPA believes that the potential economic impact of complying with this SNUR is not expected to be significant or adversely impact a substantial number of small entities. In a SNUR that published on June 2, 1997 (62 FR 29684) (FRL-5597-1), the Agency presented its general determination that proposed and final SNURs are not expected to have a significant economic impact on a substantial number of small entities, which was provided to the Chief Counsel for Advocacy of the Small Business Administration.

D. Unfunded Mandates Reform Act

Based on EPA's experience with proposing and finalizing SNURs, State, local, and Tribal governments have not been impacted by these rulemakings, and EPA does not have any reasons to believe that any State, local, or Tribal government would be impacted by this rulemaking. As such, EPA has determined that this regulatory action would not impose any enforceable duty, contain any unfunded mandate, or otherwise have any affect on small governments subject to the requirements of sections 202, 203, 204, or 205 of the Unfunded Mandates Reform Act of 1995 (UMRA) (Public Law 104-4).

E. Executive Order 13132: Federalism

This action would not have a substantial direct effect on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, entitled Federalism (64 FR 43255, August 10, 1999).

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This proposed rule would not have Tribal implications because it is not expected to have substantial direct effects on Indian Tribes. This

proposed rule would not significantly or uniquely affect the communities of Indian Tribal governments, nor would it involve or impose any requirements that affect Indian Tribes. Accordingly, the

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requirements of Executive Order 13175, entitled Consultation and Coordination with Indian Tribal Governments (65 FR 67249, November 6, 2000), do not apply to this proposed rule.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045, entitled Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997), because the impact of this SNUR will be less than \$100 million. Executive Order 13045 only requires analysis of impacts on children for rules that will have an impact of \$100 million or more.

H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use

This proposed rule is not subject to Executive Order 13211, entitled Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use (66 FR 28355, May 22, 2001), because this action is not expected to affect energy supply, distribution, or use.

I. National Technology Transfer Advancement Act

This action does not involve any technical standards; therefore, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104-113, section 12(d) (15 U.S.C. 272 note), does not apply to this action.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

This action does not entail special considerations of environmental justice related issues as delineated by Executive Order 12898, entitled Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 FR 7629, February 16, 1994).

K. Executive Order 12988: Civil Justice Reform

In issuing this proposed rule, EPA has taken the necessary steps to eliminate drafting errors and ambiguity, minimize potential litigation, and provide a clear legal standard for affected conduct, as required by section 3 of Executive Order 12988, entitled Civil Justice Reform (61 FR 4729, February 7, 1996).

List of Subjects in 40 CFR Part 721

Environmental protection, Chemicals, Hazardous substances, Reporting and recordkeeping requirements.

Dated: July 5, 2006.

Charles M. Auer,
Director, Office of Pollution Prevention and Toxics.

Therefore, it is proposed that 40 CFR part 721 be amended as follows:

PART 721--[AMENDED]

1. The authority citation for part 721 would continue to read as follows:

Authority: 15 U.S.C. 2604, 2607, and 2625(c).

2. By adding new Sec. 721.10068 to subpart E to read as follows:

Sec. 721.10068 Elemental mercury.

(a) Definitions. The definitions in Sec. 721.3 apply to this section. In addition, the following definition applies: Motor vehicle has the meaning found at 40 CFR 85.1703.

(b) Chemical substances and significant new uses subject to reporting. (1) The chemical substance elemental mercury (CAS. No. 7439-97-6) is subject to reporting under this section for the significant new uses described in paragraph (b)(2) of this section.

(2) The significant new uses are:

(i) Manufacture or processing of elemental mercury for use in convenience light switches in new motor vehicles.

(ii) Manufacture or processing of elemental mercury for use in convenience light switches as new aftermarket replacement parts for motor vehicles.

(iii) Manufacture or processing of elemental mercury for use in

switches in anti-lock brake systems (ABS) in new motor vehicles.

(iv) Manufacture or processing of elemental mercury for use in switches in ABS as new aftermarket replacement parts for motor vehicles that were manufactured after January 1, 2003.

(v) Manufacture or processing of elemental mercury for use in switches in active ride control systems in new motor vehicles.

(vi) Manufacture or processing of elemental mercury for use in switches in active ride control systems as new aftermarket replacement parts for motor vehicles that were manufactured after January 1, 2003.

(c) Specific requirements. The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) Revocation of article exemption. The provisions of Sec. 721.45(f) do not apply to this section. A person who imports or processes the substance as part of an article for the significant new use must submit a significant new use notice.

(2) [Reserved]

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